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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/856,845	10/29/2001	Akira Saito	0649-0777P	4751

2292 7590 10/21/2003

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EXAMINER

WYROZEBSKI LEE, KATARZYNA I

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/856,845

Applicant(s)

SAITO ET AL.

Examiner

Katarzyna Wyrozewski Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 16-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 24 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 0803.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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In view of applicant's amendment mailed on 8/22/2003, rejections of record are not overcome and following final office action is necessitated.

The applicants have acknowledges election of group 1, claims 1-15 without traverse. Restricted claims 16-23 are still pending. If the application becomes in condition for allowance, claims 16-23 will have to be cancelled.

The rejected over the prior art of record was meant to reject all claims 1-15. The examiner appreciates applicant's note. The claims rejected are 1-15 and 1-11 is a typo.

1. Claims 1-15, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 7-330959 ('959) in view of JP 07292161 ('161).

The discussion of the disclosure of prior art of JP'959 and JP'161 from paragraph 5 of the office action mailed on 4/18/2003 is incorporated here by reference.

Newly added claims are also rejectable over the prior art of record for the following reasons: In order to provide for over 60% modification, at least 0.6 equivalents of the glycidyl compound have to be added. Since the prior art teaches vinyl content of approximately 87 % addition of approximately 0.87 equivalents of glycidyl compound would have been obvious.

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2. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 7-330959 ('959) in view of JP 07292161 ('161) as applied to claims 1-15 and 24 above, and further in view of KITAGAWA (US 4,914,248).

The discussion of the disclosure of prior art of JP'959 and JP'161 from paragraph 5 of the office action mailed on 4/18/2003 is incorporated here by reference.

The difference between the present invention and the disclosure of JP'959 and JP'161 is recitation of the number of repeat units on the glycidyl compound.

With respect to the above difference, the prior art of KITAGAWA discloses another compound utilized to modify the diene rubber used in vulcanization. The compound contains amine with glycidyl group, wherein the number of repeat units 2 or more.

Compound such as that of KITAGAWA also results in modifying the molecular weight of the rubber and further resulting in composition having improved processability strength and other properties (col. 1).

In the light of the above disclosure it would have been obvious to one having ordinary skill in the art at the time of the instant invention to vary the number of repeat units in the glycidylamine compound of JP'959 as it is done in KITAGAWA and thereby obtain the claimed invention. Modification to the number of repeat unit would also change the properties of the rubber composition, since as in prior art of KITAGAWA, the compound is reactive in a similar manner.

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In the response to the office action mailed on 4/18/2003 the applicants have argued following:

a) JP'959 does not disclose polymer having over 60% of the polymer modified by glycidylamine or specific content of the modification to the rubber compound.

After careful reconsideration of the prior art of record, it is examiner's position that although the prior art does not explicitly disclose the content of the modified SBR, such is evident from the provided example H in Table 1. In SBR rubber only butadiene has ethylenic unsaturation in polymer backbone, therefore only butadiene part of the SBR can be modified. In example H, it is disclosed that styrene content is 14.8% and vinyl or butadiene content is 39.2%. Considering the fact that the molecular weight of the rubber in example H is 45, vinyl content is approximately 87%. Therefore one of ordinary skill in the art could modify up to approximately 87% of the butadiene content. As a result of such modification, the prior art of record arrives at its improved rubber composition.

b) JP '161 adds nothing to the deficiencies of JP'959 and it does not mention modified component.

With respect to the above argument, JP'161 was not utilize to provide for modified component. As it was stated in the office action mailed on 4/18/2003 JP'161 was utilized to provide for presence of oil extenders with its amounts, amounts of vulcanizing agent and vulcanization accelerator as well we lower amounts of carbon black, kneading temperature of 135-180°C and lower Mw/Mn ratios (2.2 or less). Modification is already covered in JP959. Therefore the applicants have not successfully traversed examiner's position as to why it would

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not have been obvious to combine prior art disclosures for the reasons that they were combined for.

c) JP'161 required that the vulcanization temperature be 160°C, whereas the present invention requires vulcanization temperature of 120°C or less

With respect to the above argument, the vulcanization temperature of the present invention is not part of any pending claims.

3. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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***Note: In December 2003 the USPTO will be moving to new location in Alexandria. As a result examiner's phone numbers will change. New number for the examiner of record will be 571-272-1127).***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski Lee whose telephone number is (703) 306-5875. The examiner can normally be reached on Mon-Thurs 6:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Katarzyna Wyrozebski Lee  
Primary Examiner  
Art Unit 1714

October 15, 2003